

ABSTRACT

Methods are provided for making vertical feed through electrical connection structures in a substrate or tile. The vertical feed throughs are configured to make the tile attachable and detachable as a layer between other substrates. For example, the tile with vertical feedthroughs can form an easily detachable space transformer tile in a wafer test system. The vertical feed through paths are formed with one end of each feed through hole permanently encapsulating a first electrical contact, and a second end supporting another pluggable and unpluggable electrical probe contact. Decoupling capacitors can be further plugged into holes formed in close proximity to the vertical feed through holes to increase performance of the decoupling capacitor.